



## AURORA 101 in Greece

### Phaethon 2004, 22-28 May 2004

#### Report 9 - Tuesday 25th May

At 6.30am, it was time for most solar car teams to wake up. What they faced was a howling wind off the water and the mountains behind Patras covered in cloud. Great Aurora solar car weather. It was Brad Trewin's birthday. What he faced was more complicated testwork on Aurora 101's electrical system to trace how to recover 40% of the power we expected.



The problem we have is that the motor controller, which delivers the power to the motor is set at 100A. However under certain conditions it trips off at 60A, cutting off the power supply to the motor. When this happens the driver has to "restart", which takes some time and adds to complications of merely driving the car. Eventually the electric system comes back on track, but we have lost time and speed. The other mystery is that this failure started only after the first track race at Hellenikon.



After the first day of the rally Aurora was down in eighth place, about 1:25 behind Nuna II which was holding down third place. To combat this we constructed a restart system, a magnificent combination of Dutch courage from Bram and Aussie "she'll be right" from Jack. We changed the motor controller, we tested our spare motor, we put in new chokes but nothing seemed to improve the situation.



Under cloudy skies and high winds, the field started to move out for the day's trip to Olympia. This was initially on the freeway climb out of Patras, through four tunnels and on a multilane highway. It then switched to the minor road through small towns, villages and farms into the mountains.

On the reconnaissance mission last week, we were shocked at the steepness of the hills and the sharpness of the corners, and today we wondered whether the solar cars could make this climb.



Soon we reached the start of the first Special Stage at Skouras, a 6.54km stretch featuring several sharp corners, a good downhill run and undulations. Whilst waiting for our turn the first crash of the Rally occurred, with the beautiful ISF4000 car from Salesian College running into the back of the Aurora support trailer. Salesian now sports a big bandage on it's front corner and the team were graciously apologetic for the minor damage.



Kon is growing in confidence in the car in spite of the power restriction and reached 130km/h on this stretch finishing 5th for the stage. Then came the hills. Steep, slow and winding was the local countryside, and the solar cards had to contend with a flock of sheep being driven along the road, beekeepers, remote churches and small farms. Our team member Jack McArthur, himself a sheep farmer from the rich area of Hamilton in Victoria, appreciated this diversion although they looked quite different from the merinos of Australia.



The great news was that we reached the top. Then it was a long, winding ridge road to the starting point of the second Special Stage at Foloji, a frightening 8.45km downhill into Olympia. This started with downhill hairpin corners. Nuna II broke a front wheel spat on it, Yale skidded on its nose but Aurora 101 had a clean trip. The final order for this stage was TIGA at 5:17, OSU at 5:21 and Aurora at 6:58. This was the end of day 2 and we had pulled one place back and were lying in 7th, only 4 seconds behind 6th place Yale.



The arrival into Olympia after a hair raising day was a relief to the teams, and many had the chance to take tours of the ruins before finding their favourite Taverna for dinner. It was Brad Trewin's birthday, and a special cake was made out of a bit of dry bread, a single candle, a Greek flag as well as a umbrella from a tropical drink. When he gets the electrical system fixed, he'll get a chocolate cake.



Team leader David Fewchuk joined the seniors of the world of solar car racing to sign a declaration of intent to stage a solar car race between Olympia and Beijing in 2008. This declaration was ratified by the Lord Mayor of Olympia.



Meanwhile the team toiled on looking for any possibility of why the electrical problem exists, including a long

discussion with Andrea Vezzini of the Biel University in Switzerland.



We ended the night at still 60% of the power expected. Perhaps the Greek Gods would work a fix in the morning.

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